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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/686,760	10/12/2000	Toshikazu Nakajima	Q61105	4804

7590 12/03/2003
Sughrue Mion Zinn Macpeak & Seas PLLC
2100 Pennsylvania Avenue N W
Washington, DC 20037-3213

EXAMINER

AHN, SAM K

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 12/03/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/686,760

Applicant(s)

NAKAJIMA, TOSHIKAZU

Examiner

Sam K. Ahn

Art Unit

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10 and 12-24 is/are rejected.
- 7) ☒ Claim(s) 8 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5-8 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

1. The references cited in the form 1449 in paper no.5 and 6 are duplicates of the references cited in the form 1449 in paper no.8.

Drawings

1. Figure 7 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 13-18 are objected to because of the following informalities:

In claim 13, line 17, the Office suggests deleting " --- Power calculating of--- " and inserting " --- power of --- ".

In claim 13, line 24, the Office suggests deleting " --- correcting data." and inserting " --- correction data. " for consistent terminology, wherein claims 14-18 directly or indirectly depend on claim 13.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6 and 13-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6 and 21, in lines 4-7, recite "storing ... when at least one of said transmission frequency and environmental temperature." However, it is unclear as to when it is stored. Is it equivalent to claim 3 wherein it is stored when frequency and temperature is varied?

Claim 13 recites the limitation "the first storage means" in line 20. There is insufficient antecedent basis for this limitation in the claim, wherein claims 14-18 directly or indirectly depend on claim 13.

Claim 19 recites the limitation "said transmission signal generating means" in line 6, "said transmission means" in line 7, "said base band signal", in lines 12-13 and 17, "the (or said) first storage means", in lines 15-16 and 20. There is insufficient antecedent basis for this limitation in the claim.

Furthermore, claim 19, in line 19, recites "a transmission level". Is this the same transmission level as recited in line 16?

The scope of claim 19 cannot be properly determined from the language of the claim.

Claims 20 and 22-24 directly or indirectly depend on claim 19.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-7, 9, 10 and 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Moriyama et al. ('823).

Regarding claims 1 and 4, Moriyama discloses method and an apparatus of a transmitter assembly including a pre-distortion type linearizer correcting to mutually cancel a distortion component caused in a transmission signal and a correction data component (see Fig.50) comprising a first storage means (24a in Fig.29, note col.43, lines 46-54, wherein the correction data is stored in the internal memory of the control unit, 24 in Fig.50) for preliminarily storing said correction data (see Fig.51A~C).

Regarding claims 2 and 5, Moriyama teaches all subject matter claimed, as applied to claim 1 or 4. Moriyama further teaches wherein said first storage

means manages correction data as table per transmission level, as explained above. (see Fig.51A~C)

Regarding claims 3 and 6, Moriyama teaches all subject matter claimed, as applied to claim 1 or 4. Moriyama further teaches a second storage means (25a, 25b in Fig.50) having a plurality of table of said correction data per transmission frequency (Fig.51A) and environmental temperature (Fig.51B), and means (24 in Fig.50) for updating storage content of said first storage means with the corresponding table of said second storage means when at least one of the transmission frequency and the environmental temperature is varied. (note col.44, line 3 – col.45, line 13)

Regarding claims 7 and 10, Moriyama teaches all subject matter claimed, as applied to claim 2 or 5. Moriyama, as explained previously, teaches correction data corresponding to the transmission level is stored memory (25a, 25b in Fig.50), wherein the data is stored preliminarily in the internal memory of the control unit, 24 in Fig.50. Although Moriyama does not explicitly disclose an address associated with the data, it is inherent that a corresponding address is provided since the data is stored in a memory where an address is given to each data. This is well-known and is a basic function of memory devices.

Regarding claims 9 and 12, Moriyama teaches all subject matter claimed, as applied to claim 1 or 4. Moriyama further teaches said correction data consisting a predetermined amplitude and phase value of the transmission signal. (see Fig.64 and note col.54, lines 19-38)

Allowable Subject Matter

5. Claims 8 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 13-18 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, and claim objection set forth in this Office action.

6. The following is a statement of reasons for the indication of allowable subject matter:

Present application discloses a transmitter comprising distortion compensating function wherein the transmitter has a first memory with correction data preliminarily stored. Upon detection of temperature of frequency change, the correction data is updated by retrieving correction data from a second memory. Closest prior art, Moriyama, teaches in the same field of endeavor with all the elements recited. However, Moriyama does not teach a correction data corresponding to a transmission level wherein the transmission level is determined from a sum of an alternating current voltage value corresponding to an instantaneous power of a transmission signal and a direct current voltage value corresponding to power of

transmission output signal. Therefore, prior art does not teach or suggest all the elements recited.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Maniwa, Park et al., Proctor et al. and Leyendecker teach a transmitter with predistortion compensating temperature and frequency variations where compensating values are stored in a memory.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Sam Ahn** whose telephone number is **(703) 305-0754**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Stephen Chin**, can be reached at **(703) 305-4714**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306

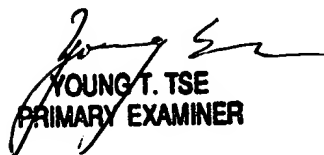
Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Sam K. Ahn
12/1/03


YOUNG T. TSE
PRIMARY EXAMINER